Province of
British Columbia
Ministry of
Health

DIVISION OF TUBERCULOSIS CONTROL

ANNUAL REPORT 1984-1985

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FOREWORD

This report presents statistical and epidemiological information about tuberculosis in British Columbia derived from the activities of the Division of Tuberculosis Control during the calendar years, 1984 and 1985. The report covers the following aspects: in-patient treatment of tuberculous patients, treatment of active tuberculous disease as well as chemoprophylaxis, an analysis of active cases, of contacts and tuberculosis-related mortality; case-finding programmes are reviewed. Information respecting North American Indians refers only to Registered (Status) Indians, who constitute a distinct administrative group for which health care is provided, for the most part, by the Federal Government through Medical Services, Pacific Region, Health and Welfare Canada.

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Director.

DIVISION OF TUBERCULOSIS CONTROL

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DIRECTOR'S REPORT
DIVISION OF TUBERCULOSIS CONTROL
E.A. Allen, M.B., F.R.C.P.(C)

The Division of Vital Statistics provides a valuable statistical service to the Division of Tuberculosis Control. Summaries of all medical records including notifications, follow-up reports, active case registry and treatment records are processed by the computer system monthly, by the Division of Vital Statistics. In addition, the Division of Vital Statistics arranges to provide annual listings of all the known cases of tuberculosis and selected non-tuberculous cases to the Tuberculosis Registry, as well as a number of special listings separately for tuberculous and non-tuberculous cases. The Annual Statistical Report is prepared for the Director by a Research Officer of the Division of Vital Statistics.

The five major sections of this report encompass the following subjects: **INSTITUTIONS, TREATMENT, DIAGNOSTIC AND SURVEY CLINICS, NEW ACTIVE CASES, CONTACT TRACING AND MORTALITY.**

1984/1985
TUBERCULOSIS IN-PATIENT SERVICE
(Tables 1 - 3A)

The in-patient service referred to in this report is provided by a specially designed ward dedicated to tuberculosis treatment and under the responsibility of the Vancouver General Hospital (T.B. Ward, VGH). It is housed in the Willow Chest Centre and offers 25 beds. Patients with active tuberculous disease are also admitted to other wards in the Vancouver General Hospital and other general hospitals in the Province outside the above specific tuberculosis in-patient service. These other in-patients are in a minority and are usually admitted for short periods. Their numbers are not included under "admissions" or "discharges" in this section of the report but are included in tables 4 to 5A "Place of Treatment of Active Tuberculosis...".

ADMISSIONS:

The total number of admissions to T.B. Ward, VGH during 1984 was 149 (154 in 1985), a slight rise from the previous year. Of this number, 121 (113 in 1985) had active tuberculosis, 9 (5 in 1985) having non-tuberculous disease and 10 (12 in 1985) having mycobacterial disease other than that caused by tubercle bacilli. Nine (5 in 1985) with previously inactive disease were admitted for possible reactivation which was not confirmed. Of the 121 tuberculous cases, 23 were re-admissions (19 percent). (Of the 113 tuberculous cases in 1985, 20 were re-admissions (18 percent)).

Since 407 persons were diagnosed as having active tuberculosis during 1984, the 102 persons (represented by the 121 "admissions"above) with active tuberculosis, admitted in the year, represent 25 percent of the total. (100/340 = 29% in 1985)

Of the 121 admissions, (113 in 1985) 117 (106 in 1985) had primarily pulmonary tuberculosis whereas 4 (7 in 1985) had non-pulmonary disease. The ratio of male to female admissions was 92 to 57 (117 to 37 in 1985), i.e. 62 percent (76 percent in 1985) of admissions were male. A disproportionate number of the admissions were North American Indian[1] (39) (35 in 1985) Chinese (24) (21 in 1985), and East Indian (11) (11 in 1985); the proportions being 26 percent (23 percent in 1985), 16 percent in

1984/1985, and 7 percent in 1984/1985 respectively.

[1] Includes both Registered (30) (23 in 1985) and non-status (9) (12 in 1985) Indians.

DISCHARGES:

An analysis of the discharges from T.B. Ward, VGH in 1984, which totalled 145 (157 in 1985) (including all diagnostic categories) shows that 120 or 83 percent occurred before the end of three months. (144 or 92 percent in 1985). This confirms the trend toward shorter hospitalization. All of the remaining 25 discharges (13 in 1985) occurred before six months. The average length of stay for a person with active tuberculosis was 51 days in 1984 and 47 days in 1985. Patients with active tuberculosis contributed a total of 5,825 patient-days in hospital in 1984 and 5,923 patient-days in hospital in 1985.

Patients with other mycobacterial disease, non-tuberculous disease and inactive tuberculosis accounted for 1,156 (1,115 in 1985) additional patient-days or 17 percent of the total patient-days provided by all discharges from this ward. (16 percent in 1985). In Tables 3 and 3A, dealing with the various types of discharge from hospital, the two categories "against medical advice" and "disciplinary" should be understood to represent an underestimate of those who leave earlier than is considered wise by the responsible physician, based on a variety of practical, legitimate concerns. In an effort to maintain rapport with such patients, a physician will often reluctantly accede to an earlier discharge "on medical advice".

Eighty-five percent of the pulmonary cases (excluding pleurisy) admitted to T.B. Ward, VGH, were positive on smear,(77 percent in 1985) underlining the fact that a major concern was the temporary isolation of infectious patients during the early phase of treatment to reduce the risk of transmission of disease to their close contacts - often young persons or children in the same house. The latter is far from being the only concern and in persons admitted there is usually a multiplicity of problems including those arising from poor compliance, drug reaction, drug resistance, associated illness, drug and alcohol abuse and socio-economic factors.

In summary, a very high percentage of those admitted to the Tuberculosis Ward in the Vancouver General Hospital are confirmed cases of active infectious pulmonary tuberculosis. Most are male, they belong to all age groups and a disproportionate number are Native Indians. Their stay is relatively short (7 weeks). The decline in the role of expensive hospital care is underscored by the fact that only 25 percent (29 percent in 1985) of all persons with active tuberculosis diagnosed in 1984 was admitted to the Special T.B. Ward, Vancouver General Hospital.

CHEMOPROPHYLAXIS
(Table 6)

On December 31, 1984, 673 residents of British Columbia were on preventive drug treatment with isoniazid for a variety of indications related to their increased risk for the development of active tuberculosis. Six hundred and ninety-three were on similar therapy as of December 31, 1983 and 692 in 1985.

The 673 persons in 1984 had the following ethnic distribution (based largely upon country of origin); in 1985 the pattern was broadly similar except for an increase in the number of Vietnamese requiring preventive treatment.

	1984		1985	
	Number	Percent	Number	Percent
White	353	53	388	56
Chinese	137	20	105	15
East Indian	53	8	51	7
Vietnamese	20	3	45	6
Registered (Status) Indians	89	13	80	11
Non-status Indians	21	3	23	3
	673	100	692	98

Table 6 shows that the most common indication for chemoprophylaxis was evidence of infection in a contact of an active case.
It is assumed that many thousands of persons in British Columbia have had

tuberculosis and either have never had treatment or been inadequately treated. Such persons are at increased risk of reactivation and are candidates for preventive Isoniazid treatment. The fact that only 83 persons with inactive pulmonary tuberculosis were offered such treatment in 1984 and 1985 respectively underscores the problems associated with this approach. Depending on the estimates of the possible number of candidates belonging under this heading one might speculate that between a half and one percent of them are offered treatment each year.

Table 6A illustrates the outcome in those discontinuing chemoprophylaxis during 1984/1985. The number of patients discontinuing chemoprophylaxis during 1984 was 733. 439 (60 percent) had continuous treatment and completed the course offered them. Of the 439 who discontinued therapy on medical advice 401 (91 percent) had received more than six months treatment. The number of patients whose treatment was incomplete was 294 (40 percent). 165 (23 percent) of the total number who ended their chemoprophylaxis in 1984, failed to complete therapy because of poor compliance with therapy and a further 67 (9 percent) failed because of actual or suspected drug reactions. The broad results were similar in 1985.

This represents a high failure rate and points up the difficulty in sustaining compliance among those who are less well motivated than persons suffering from active tuberculous disease. It also emphasizes the need to pay careful attention to the selection of those offered treatment and to their supervision once treatment has been started.

ANTI-TUBERCULOSIS TREATMENT
(Table 7,7A,8)

On December 31st, 1984, 305 persons (274 in 1983) were on antimicrobial drug therapy for active tuberculosis. 160 (52 percent) were males and 145 (48 percent) were females. Eighteen (6 percent) were under the age of fifteen, 214 (70 percent) were between the ages of fifteen and sixty-four and 76 (25 percent) were aged sixty-five years or older. 137 (45 percent) came from the City of Vancouver.

An additional 18 persons were receiving antimicrobial drug therapy for mycobacteria other than tuberculosis.

Table 8 illustrates the outcome of drug therapy among those with active

tuberculosis who finally discontinued treatment during 1984/1985, in terms of the reason for discontinuation of therapy and its total duration. Total duration in this sense is not synonymous with the duration of adequate drug therapy. The number of patients discontinuing treatment during 1984 was 375; of which 301 (80 percent) had continuous adequate treatment and completed the course on medical advice. 244 (81 percent) of the 301 had at least nine months treatment. The number of patients who did not complete treatment was 74; 27 (7 percent) of the total of 375 were uncooperative or lost to follow-up and 8 (2 percent) received inadequate treatment because of reaction to the drugs.

DIAGNOSTIC AND SURVEY CLINICS

Table 9)

The number of patient visits to the clinics of the Division of Tuberculosis Control is given in the following table illustrating the trend over the last decade.

PATIENT VISITS TO CLINICS OF T.B.CONTROL, B.C.

1973	-	46,943
1976	-	35,970
1980	-	51,755*
1981	-	45,094*
1982	-	44,149*
1983	-	35,774
1984	-	45,539
1985	-	47,016

* The Southeast Asian refugee programme contributed to the increase in these years.

In Table 9, the yield in terms of various abnormal chest conditions, for the survey chest x-ray services of the Division is detailed for 1984 and 1985 separately. The yield for new pulmonary tuberculous cases of various kinds - active, inactive and presumed tuberculous (apical scarring) in 1984 was 115 persons or a yield of 1287 per 100,000 persons x-rayed. (1985 - 119 or 1419 per 100,000). The number of persons with active tuberculosis was 14 for a rate of 169 per 100,000. (1985 - 19 or 226 per 100,000).

B.C.G.VACCINATION
(Table 10)

During 1984, 399 persons received B.C.G. vaccination, a drop of fifty-six percent from the previous year of 717 persons. Of this number 310 or 78 percent were Registered Indians, the great majority of whom represented newborn children. 274 or 41 percent of the 668 Registered Native Indians on reserve who were born during 1984 received the vaccine. This pattern was similar in 1985 except that 54 percent of the newborn Registered Native Indians were vaccinated. It is the policy of the federal Medical Services, Pacific Region, to offer B.C.G. to all new born status Indians.

ACTIVE CASES
(Tables 11 - 21)

For purposes of this report, "active cases", when unqualified, will refer to persons with active tuberculosis who were diagnosed during the current year; it will exclude those persons diagnosed active in previous years but who have remained continuously active into the current year. The term "new active" will refer to those persons diagnosed as having active tuberculosis during the current year but who were not known or suspected to have had an active episode of tuberculosis prior to the current year. The term "reactivated" includes two groups of persons (i) those with a documented previous episode of active tuberculosis (Reactivation Type I) and (ii) those with evidence of healed disease of such a typical nature that it leads to a presumption of inactive tuberculosis (Reactivation Type II). Evidence of the latter usually consists of a chest x-ray showing apical fibrosis or scarring in a person with a positive tuberculin test. The numbers belonging in these various categories are summarized in Summary-Table A.

ACTIVE CASES
SUMMARY - TABLE A

Cases diagnosed active in:	Number (1984)	Percent (1984)	Number (1985)	Percent (1985)
New active: not known to be previously active	338	83%	284	84%
Reactivated:	69	17%	56	16%
Previously documented active T.B.	(50)	(12%)	(38)	(11%)
Previously presumed T.B.inactive	(19)	(5%)	(18)	(5%)
TOTAL	407	100%	340	100%
Provincial Rate: per 100,000	14.1		11.8	
Sex distribution:				
Male	224	55%	211	62%
Female	183	45%	129	38%
TOTAL	407	100%	430	100%

Pulmonary (including pleurisy)	608	(81%)
Non-pulmonary	139	(19%)
TOTAL (1984 and 1985 combined)	747	(100%)

Table 12 shows the overall downward trend in the annual incidence rate between 1979 and 1985 from 15.0 to 11.8 per 100,000. The sex distribution remains predominantly male.

ORIGINAL INVESTIGATIONS

(Table 13)

(This refers to test procedures other than simple clinical examination by history and physical examination).

The agency providing the initial investigation (usually an x-ray) leading eventually to the diagnosis of active tuberculosis was analyzed. This investigation did not necessarily result in a correct diagnosis of active tuberculosis being made at that time but it started the process towards the diagnosis, which in many instances was only later confirmed by other physicians or investigations, quite commonly within the Division of T.B. Control.

Some of the results for 1984 are as follows:

(i) In 21 percent of cases, the initial diagnostic investigation was undertaken by one of the units of the Division in the course of contact tracing, survey and surveillance programs and in the investigation of persons referred from outside physicians or agencies or on self-referral. Given the limited size and availability of the Division's regular diagnostic facilities relative to the total number of physicians and hospitals in the province, this represents a significant contribution. The relative contribution of the specialized tuberculosis services to the initial investigation has always been of this magnitude.

(ii) In 1 percent of cases, initial investigation was undertaken by one of the units of the Indian Health Services.

(iii) Private radiologists and the x-ray departments of general hospitals along with other forms of investigation undertaken in general hospitals either as in-patients or out-patients provided the initial diagnostic investigation of the majority of persons diagnosed as having active tuberculosis during the current year (298 or 73 percent). Often the diagnosis had not been suspected clinically.

(iv) The role of diagnostic resources other than x-ray is illustrated by the fact that 59 or 14 percent of patients were diagnosed by this means. Not infrequently the diagnosis was an unexpected finding at histology.

(v) Four (5) percent of the patients were first diagnosed at the time of their death. (autopsy and postmortem bacteriology or histology). (The pattern was similar in 1985.)

The substantial role the Division plays in contact surveys, surveillance of persons at increased risk, screening of selected employment groups and as a consulting service represents its contribution towards early diagnosis.

The major contribution towards initial diagnostic testing must, of necessity and for logistical reasons, be played by the broad body of physicians of this province. This fact is well illustrated by the above analysis. More particularly it points up the opportunity which exists for all physicians to assist in the task of early detection by including this disease in the differential diagnosis when appropriate. It is the duty of the Division, the Health Officers of the Province and medical educators to make sure that all practising physicians understand when it is appropriate to consider the diagnosis and what investigations should be done.

BACTERIOLOGICAL CONFIRMATION OF ACTIVE T.B. 1984–1985
SUMMARY – TABLE B

by Anatomical Site:

	Pos. smear	Pos. cult. only	Culture/ and/or smear	NUMBER	PERCENT
PULMONARY (incl.pleurisy)					
Bacillary[1]	290*	192	482	482	83%
Non-Bacillary				96	17%
Sub-TOTAL				578	(100)
Bacillary status not known or not determined				30	(5)
TOTAL				608	(100)
NON-PULMONARY Bacillary[1]	33	60	93	93	79%
Non-Bacillary				24	21%
Sub-TOTAL				117	(100)
Bacillary status not known or not determined				22	16%
TOTAL				139	(100)
ALL CASES					
Bacillary				575	83%
Non-Bacillary				120	17%
Sub-TOTAL				695	(100)
Bacillary status not known or not determined				52	(7%)
TOTAL: ACTIVE CASES				747	(100)

* includes 16 cases of positive smear only.

1 Includes all types of specimen – sputum, biopsy, gastric lavage, pleural fluid, etc.

BACTERIOLOGICAL CONFIRMATION OF ACTIVE T.B. 1984-1985
SUMMARY - TABLE B ..continued

by Extent and Type of Pulmonary Disease	TOTALS	# TESTED	BACILLARY NUMBER	BACILLARY PERCENT
Primary	44	34	17	50%
Minimal	243	239	194	81%
Moderately Advanced	142	141	136	96%
Far Advanced	76	71	70	98%
Pleurisy	57	50	28	56%
Tuberculoma	2	2	1	50%
Miliary	30	28	24	85%
Silico-Tuberculosis	11	11	11	100%
Extent Unknown	3	2	1	50%
	608*	578	482	83%
by Site of Non-Pulmonary Disease				
Meninges & Central Nervous System	2	2	2	100%
Intestines & Peritoneum	10	10	8	80%
Bones & Joints	19	17	16	94%
Skin	3	3	2	66%
Lymphatic System	74	60	48	80%
Genito-Urinary System	23	21	15	71%
Multiple Sites & other Organs	8	4	2	50%
	139	117	93	79%
by Prior Status for T.B.				
New Active	621	591	483	82%
Reactivated (incl. both "Prev. Act." & Presumed T.B.")	126	118	92	78%
	747	709	575	83%
by Native Indian Status (Registered)	116	111	93	84%

* includes 30 cases in which bacteriology status was not known or not determined.

BACTERIOLOGICAL CONFIRMATION OF ACTIVE TUBERCULOSIS

During 1984-85, of the pulmonary cases, where the bacteriological status was known, 83 percent were bacteriologically confirmed and 60 percent yielded a positive direct smear for tubercle bacilli (Summary Table B). Similarly, eighty-three percent of all cases where the bacillary status was known were bacteriologically confirmed in 1984-1985. In 7 percent of the total of 747 active cases reported in 1984-1985, the bacillary status was not known or was not determined. Most such instances represent post mortem or histological diagnoses in which a suitable specimen for bacteriology was not obtained.In summary, a high percentage of cases was confirmed bacteriologically.

It is important that there be bacteriological re-confirmation before deciding on reactivation; otherwise, this designation may be entertained too lightly in cases of minor or doubtful alteration of shadows on x-ray or after the occurrence of certain suggestive symptoms. The proportion of reactivated cases with positive bacteriology illustrates that the latter tendency was not prevalent.

Native Indians presented a similar rate of positive bacteriology to that applying to the total number of active cases thereby confirming that the same criteria for diagnosis were applied to this group as to the rest of the population.

Tables 11, 11A, 12, 17, and 17A, all give further details of the bacillary status of various categories of patient or diagnosis.

HEALTH DISTRICT OF RESIDENCE - ACTIVE TUBERCULOSIS (Table 15)

As in 1983, the highest rates were obtained in Metro Vancouver (41 and 21 respectively for 1984 and 1985). The major contributor to these rates was Vancouver City. However, it should be noted that Vancouver City rates vary greatly between Sub-units.

PREVIOUS RADIOLOGICAL FINDINGS IN ACTIVE CASES
Table 16)

This table illustrates that 30 percent of the active cases diagnosed in 1984 and 1985 derived from the follow-up of those with inactive tuberculosis and those with various abnormalities, some suspected to be tuberculous in origin. Twelve percent of all active cases in 1984 derived from the follow-up of persons with inactive tuberculosis following a previously documented active episode. This underlines the importance of following such persons, particularly where prior treatment has been inadequate or where associated, predisposing conditions exist though cases may be diagnosed active between regular (usually annual) visits to the clinics of the Division.

Of the various abnormalities listed only selected persons with inactive tuberculosis and presumed tuberculosis (inactive) are currently being recommended for routine follow-up. For the most part, this hinges on the quality of previous treatment for tuberculosis. Only very few other chest x-ray abnormalities are being routinely recalled.

ACTIVE TUBERCULOSIS BY ETHNIC ORIGIN
(Tables 17, 17A)

Although not contributing unduly large numbers of cases, East Indians, Chinese, Vietnamese and Registered Indians demonstrated relatively high rates. In Table 17A, the rates for Canadian-born and foreign-born are compared and these illustrate the significantly higher rates in those born outside Canada, a rate approximately three times that pertaining to the Canadian-born population. There has been concern that the foreign-born population not reflect a falsely high rate as a result of the contribution made by visitors who are not Canadian citizens nor landed immigrants. Only 10 of the 198 foreign-born group were visitors or on Minister's Permit in 1984..

Registered (status) Native Indians had an incidence rate of 93 per 100,000, in 1984 i.e. approximately twelve times the rate for whites in British Columbia.

NON-PULMONARY ACTIVE TUBERCULOSIS

(Tables 14, 14A and Summary Table B)

The total number of non-pulmonary cases was 139 for 1984 and 1985 combined, with 53% of them presenting primarily as tuberculous lymphadenopathy (74 cases). The next most common group was that having tuberculosis of the genito-urinary system (23 cases or 17 percent of all non-pulmonary cases). Of some concern is the fact that only 80 percent of the cases of tuberculous lymphadenopathy were bacteriologically confirmed. This often results from a lack of awareness of the possibility of tuberculosis as the cause or from the mishandling of biopsy specimens. As mycobacteria other than tubercle bacilli assume a relatively greater role as a cause of mycobacterial lymphadenopathy, particularly in Canadian-born children, the necessity to identify the organism becomes increasingly important.

CONTACTS OF SOURCE CASES WITH ACTIVE PULMONARY TUBERCULOSIS (Tables 22 -23)

SUMMARY - TABLE C

SOURCE (Diagnosed in 1984-1985)		HOUSEHOLD CONTACTS Diagnosed in 1984-1985			
PULMONARY TUBERCULOSIS, ACTIVE - BACILLARY STATUS	NUMBER of CONTACTS (n = 590)	DISEASE ALL ACTIVE CASES		INFECTION POSITIVE TUBERCULIN REACTION (9 mm.)	
		No.	Percent	No./No.tested	Percent
Positive smear & culture	364	34	9.3	193/310	62.2%
Positive culture only	156	3	1.9	62/131	47.3%
Negative smear and culture	56	1[3]	1.8	24/49	48.9%
TOTALS	576[1]	38	6.6	279/490[2]	36.5%

1 Excludes 14 contacts of active pulmonary source cases in which the bacteriological status of the source case was not stated.

2 490 out of total of 590 household contacts were tuberculin tested. i.e. 83% were tested and 17% were not.

3 This case was a pleurisy with effusion; questionable pulmonary lesion associated; no other case of tuberculous pleurisy was designated "pulmonary tuberculosis".

In 1984-1985, there were 5,170 contacts listed for the 747 active tuberculous cases diagnosed in 1984-1985. 4,645 contacts were identified with the 608 pulmonary source cases (including pleurisy) and 525 with the 139 non-pulmonary source cases. Of the 4,645 contacts of the pulmonary source cases, 590 were linked to household contacts. As will be seen in the tables detailing the contact investigation, the relationships between the following aspects were studied - pulmonary source case, proximity of contact (whether household or non-household), age of contact, initial tuberculin status of contact, bacteriological status of the source case (whether positive on smear and culture, positive on culture only or negative on both smear and culture). Among the contacts of the cases, 61 persons with active tuberculosis were found giving a rate of 1,465/100,000. This is compared with the overall provincial rate of 11.8 per 100,000 for 1985. These cases among contacts constituted 8% of the total number of active tuberculosis cases (747) diagnosed in 1984-1985. Admittedly, 22 of the 61 persons with active disease among the contacts had primary tuberculosis (36%) yet, the 39 remaining cases would still provide a rate of 839 per 100,000 or many multiples of the background rate. Among the 525 contacts of non-pulmonary source cases, no active tuberculosis was found. Nevertheless, especially in children, it is extremely important that a source be found for such extra-pulmonary forms of tuberculosis or meningitis, etc. The occurrence of disease among household contacts of pulmonary source cases with sputum negative on smear and culture is evidence either of transient infectiousness which has been missed by our normal contact procedures or perhaps more likely reflects the social environment which subjects tuberculous patients and their close contacts to a higher common risk of becoming infected.

In Table 22, the high rate of active disease among contacts under the age of 20 is illustrated (10.5 percent) where exposure is to active smear-positive, bacillary, pulmonary tuberculosis within the household; most of the cases derive from the age group 0-14 years.

The cases of active tuberculosis in the under 20 group were all found among those reacting positively to tuberculin at initial contact testing; Under the age of 20, 37 percent of household contacts of smear-positive cases exhibited a positive tuberculin reaction and were presumably infected.

Again, in Table 23, the clear differences in risk of morbidity between household and non-household exposure is illustrated among contacts under the age of 20 years.

In Tables 24-25, the likelihood of becoming infected (and producing a positive tuberculin reaction) is related to age when this relationship is studied against the bacillary status of the source case. Above the age of 30, a differential was not seen between exposure to a source who has positive smear and culture versus a source positive on culture only. In these older age groups, the presumption is that a high percentage will have been remotely infected through casual exposure. It is noteworthy that the tuberculin positive rates among the adult groups tested is very high relative to the general population. This reflects a high rate of endemic tuberculous infection in the group from which the contacts are drawn and in turn probably reflects the socio-economic milieu.

TUBERCULOSIS MORTALITY

(Tables 26 - 30)

Thirty-six and 38 persons died with active tuberculosis during 1984 and 1985 respectively. In the case of 4 of these in 1984 and 1 in 1985, although they harboured active tuberculosis, this was not considered contributory to death. Although the number of persons dying <u>from</u> active tuberculosis (32 in 1984 and 37 in 1985) is relatively small, it is disturbing that a relatively high percentage of these (34% in 1984 and 38% in 1985) was only diagnosed after death. Since tuberculosis is an eminently treatable disease, one could argue that all deaths from tuberculosis are potentially avoidable.

ACTIVE TUBERCULOSIS AMONG REGISTERED INDIANS
(Tables 31 - 33)

Fifty-nine and 57 Registered Native Indians developed active tuberculosis during 1984-1985 respectively, contributing 16% of the total number of active cases for the province. The age and sex distribution, the type of disease, the bacillary status and the health districts from which these cases came are detailed in these tables.

Registered (status) Indians exhibited an annual incidence rate in 1984 of 95.0 per 100,000 approximately 8 times the overall provincial rate, and in 1985 of 91.7 per 100,000. It is disturbing to note the relatively high proportion of active cases in the group to age 34 years. 61% in 1984 and 51% in 1985 compared with 33% and 35% for the province as a whole. The percentage of primary tuberculosis is 15.3% for 1984 and 19.3% for 1985 compared with 4.0% and 3.5% for the province. Both of these indicators suggest a continuing relatively high rate of transmission of infection among children and young adults.

SECTION 1

INSTITUTIONS

TABLES 1 - 3A

Table 1. TOTAL ADMISSIONS[1] BY AGE, AND PERCENTAGE OF TOTAL ADMISSIONS IN EACH GROUP, British Columbia, 1981-1985

AGE-GROUP	1981		1982		1983		1984		1985	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0 - 9 Years	2	1.4	4	3.0	-	-	1	0.7	-	-
10 - 19 Years	8	5.6	10	7.5	2	1.4	2	1.3	-	-
20 - 29 Years	17	11.9	25	18.6	14	9.9	28	18.8	21	13.6
30 - 39 Years	21	14.7	15	11.1	20	14.2	22	14.8	35	22.7
40 - 49 Years	19	13.3	21	15.6	30	21.3	23	15.4	16	10.4
50 - 59 Years	27	18.8	21	15.6	28	19.8	22	14.8	28	18.2
60 - 69 Years	23	16.1	19	14.2	25	17.8	22	14.8	24	15.6
70 - 79 Years	26	18.2	19	14.2	22	15.6	29	19.4	30	19.5
TOTAL	143	100.0	134	100.0	141	100.0	149	100.0	154	100.0

[1] Includes re-admissions.

NOTE: The above figures include admissions to Sunnyhill Hospital for children:

2 in 1981
4 in 1982
0 in 1983
1 in 1984
0 in 1985

Table 2 DISCHARGES FROM T.B. Ward, V.G.H.,
BY DIAGNOSIS ON DISCHARGE, SEX AND LENGTH OF STAY.
British Columbia, 1984.

DIAGNOSIS		LENGTH OF STAY IN COMPLETED MONTHS/DAYS					TOTAL
	MOS.	Under 1	1 - 2	3 - 4	5 - 6	7-11	
	DAYS	0 - 29	30 - 89	90 - 149	150-209	210-364	
PULMONARY T.B. ACTIVE							
Pleurisy	M	6	4	-	-	-	10
	F	-	-	-	-	-	-
Minimal	M	4	7	1	-	-	12
	F	9	6	-	-	-	15
Mod. Advanced	M	5	12	4	-	-	21
	F	4	3	2	-	-	9
Far Advanced	M	4	13	8	1	-	26
	F	5	4	2	-	-	11
Miliary	M	-	-	1	-	-	1
	F	-	-	-	-	-	-
Silico-TB	M	1	1	-	1	-	3
	F	-	1	-	-	-	-
NON-PULMONARY T.B. ACTIVE	M	1	1	1	-	-	3
	F	1	2	-	-	-	3
PULMONARY INACTIVE	M	3	1	1	-	-	5
	F	4	-	-	-	-	4
OTHER MYCOBACTERIUM	M	4	3	-	-	-	7
	F	3	-	1	1	-	5
NON-TB OTHER LUNG DISEASE	M	4	-	-	-	-	4
	F	4	-	-	1	-	5
TOTAL	M	32	42	16	2	-	92
	F	30	16	5	2	-	53
GRAND TOTAL		62	58	21	4	-	145
PERCENT		42.7	40.0	14.5	2.8	-	100.0
DISCHARGE DEAD		1	1	1	-	-	3

Above includes discharges from Sunnyhill Hospital for children. 0 in 1980
2 in 1981
4 in 1982
0 in 1983
1 in 1984

Table 2A DISCHARGES FROM T.B. WARD, V.G.H., BY DIAGNOSIS ON DISCHARGE, SEX AND LENGTH OF STAY. British Columbia, 1985.

DIAGNOSIS		LENGTH OF STAY IN COMPLETED MONTHS/DAYS					TOTAL
	NOS. / DAYS	Under 1 / 0 - 29	1 - 2 / 30 - 89	3 - 4 / 90 - 149	5 - 6 / 150-209	7-11 / 210-364	
PULMONARY T.B. ACTIVE							
Pleurisy	M	1	5	-	-	-	6
	F	-	-	-	-	-	-
Primary	M	-	-	-	-	-	-
	F	1	1	-	-	-	2
Minimal	M	14	18	2	-	-	34
	F	6	5	1	-	-	12
Mod. Advanced	M	4	19	3	-	-	26
	F	1	5	1	-	-	7
Far Advanced	M	8	5	3	-	-	16
	F	3	3	-	-	-	6
Miliary	M	-	1	1	-	-	2
	F	1	1	-	-	-	2
Silico-TB	M	3	2	-	-	-	5
	F	1	-	-	-	-	1
NON-PULMONARY T.B. ACTIVE	M	2	3	1	-	-	6
	F	1	-	-	-	-	1
PULMONARY INACTIVE	M	1	2	-	-	-	3
	F	-	-	-	-	-	-
OTHER MYCOBACTERIUM	M	-	6	-	-	-	6
	F	1	5	-	-	-	6
NON-TB OTHER LUNG DISEASE	M	8	2	1	-	-	11
	F	3	1	-	-	-	4
OTHER RESP. TB ACTIVE	M	1	-	-	-	-	1
	F	-	-	-	-	-	-
TOTAL	M	42	63	11	-	-	116
	F	18	21	2	-	-	41
GRAND TOTAL		60	84	13	-	-	157
PERCENT		38.0	54.0	8.0	-	-	100.0
DISCHARGE DEAD		4	4	-	-	-	8

Above includes discharges from Sunnyhill Hospital for children, 2 in 1981
4 in 1982
0 in 1983
1 in 1984
0 in 1985

Table 3. DISCHARGES FROM T.B. Ward, V.G.H., BY TYPE OF DISCHARGE, SEX, AND LENGTH OF STAY, British Columbia, 1984

TYPE OF DISCHARGE		LENGTH OF STAY IN COMPLETED MONTHS /DAYS					TOTAL BY SEX	GRAND TOTAL
	Mos.	Under 1	1-2	3-4	5-6	7-11		
	Days	0-29	30-89	90-149	150-209	210-364		
On Medical Advice	M	30	37	14	2	-	83	
	F	24	16	4	2	-	46	129
Against Medical Advice	M	2	4	1	-	-	7	
	F	5	-	1	-	-	6	13
Disciplinary	M	-	-	-	-	-	-	
	F	-	-	-	-	-	-	-
Death	M	-	1	1	-	-	2	
	F	1	-	-	-	-	1	3
TOTAL	M	32	42	16	2	-	92	
	F	30	16	5	2	-	53	145
GRAND TOTAL		**62**	**58**	**21**	**4**	**-**	**145**	**145**

Table 3A. DISCHARGES FROM T.B. WARD, V.G.H., BY TYPE OF DISCHARGE, SEX, AND LENGTH OF STAY, British Columbia, 1985

TYPE OF DISCHARGE		LENGTH OF STAY IN COMPLETED MONTHS /DAYS					TOTAL BY SEX	GRAND TOTAL
	Mos.	Under 1	1-2	3-4	5-6	7-11		
	Days	0-29	30-89	90-149	150-209	210-364		
On Medical Advice	M	32	58	7	-	-	97	
	F	12	20	2	-	-	34	131
Against Medical Advice	M	6	3	4	-	-	13	
	F	5	-	-	-	-	5	18
Disciplinary	M	-	-	-	-	-	-	
	F	-	-	-	-	-	-	-
Death	M	3	3	-	-	-	6	
	F	1	1	-	-	-	2	8
TOTAL	M	41	64	11	-	-	116	157
	F	18	21	2	-	-	41	
GRAND TOTAL		59	85	13	-	-	157	157

SECTION II

TREATMENT

TABLES 4 - 8

Table 4. PLACE OF TREATMENT OF ACTIVE TUBERCULOUS CASES BY PRINCIPAL DIAGNOSIS, British Columbia, 1984

DIAGNOSIS	DOMICILIARY		HOSPITAL T.B. WARD		OTHER GEN HOSPS.[1]		TOTAL	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Primary	20	87.0	-	-	3	13.0	23	100.0
Minimal	102	80.0	26	20.0	-	-	128	100.0
Moderately Advanced	31	41.3	37	49.3	7	9.3	75	100.0
Far Advanced	7	17.9	25	64.1	7	18.0	39	100.0
Miliary	3	33.3	3	33.3	3	33.3	9	100.0
Silico-Tuberculosis	6	75.0	2	25.0	-	-	8	100.0
Pulmonary-Extent Unknown	3	100.0	-	-	-	-	3	100.0
Pleurisy	25	1	7	21.9	-	-	32	100.0
Non-Pulmonary	67	95.7	2	2.9	1	1.4	70	100.0
TOTAL	264	68.2	102	26.1	21	5.7	387	100.0

NOTE: In addition to the above total 20 persons were diagnosed at death.

1 Treatment had been started in other hospitals in British Columbia or in other wards in the Vancouver General Hospital than the TB Ward.

Table 4A. PLACE OF TREATMENT OF ACTIVE TUBERCULOUS CASES BY PRINCIPAL DIAGNOSIS, British Columbia, 1985

DIAGNOSIS	DOMICILIARY		HOSPITAL T.B. WARD		OTHER[1] GEN. HOSPS.		TOTAL	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Primary	21	100.0	-	-	-	-	21	100.0
Minimal	76	67.3	37	32.7	-	-	113	100.0
Moderately Advanced	24	40.7	28	47.5	7	11.8	59	100.0
Far Advanced	7	25.0	20	71.4	1	3.6	28	100.0
Miliary	5	71.4	2	28.6	-	-	7	100.0
Silico-Tuberculosis	2	66.6	1	33.3	-	-	3	100.0
Extent Unknown	1	100.0	-	-	-	-	1	100.0
Pleurisy	15	68.2	7	31.8	-	-	22	100.0
Non-Pulmonary	61	92.4	5	7.6	2	-	68	100.0
TOTAL	212	65.8	100	31.1	10	3.1	322	100.0

NOTE: In addition to the above total 18 persons were diagnosed at death.

[1]Treatment had been started in other hospitals in British Columbia or in other wards in the Vancouver General Hospital than the TB Ward.

Table 5 PLACE OF TREATMENT OF ACTIVE TUBERCULOUS CASES ACCORDING TO PRINCIPAL BACTERIOLOGICAL FINDINGS, British Columbia, 1984

BACTERIOLOGICAL FINDINGS	DOMICILIARY		HOSPITAL T.B. WARDS		OTHER[1] GEN. HOSPS.		TOTAL	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
POSITIVE - Smear & culture (or smear only)								
Pulmonary	57	37.0	79	50.6	18	12.4	154*	100.0
Non-Pulmonary	18	94.7	-	-	1	5.3	19	100.0
Pleurisy	1	50.0	1	50.0	-	-	2	100.0
POSITIVE-Culture only								
Pulmonary	71	86.0	10	11.7	2	2.3	83	100.0
Non-Pulmonary	26	92.8	2	7.2	-	-	28	100.0
Pleurisy	12	86.0	2	14.0	-	-	14	100.0
NEGATIVE								
Pulmonary	40	90.9	4	9.1	-	-	44	100.0
Non-Pulmonary	10	100.0	-	-	-	-	10	100.0
Pleurisy	10	76.9	3	23.1	-	-	13	100.0
NOT EXAMINED								
Pulmonary	4	100.0	-	-	-	-	4	100.0
Non-Pulmonary	13	100.0	-	-	-	-	13	100.0
Pleurisy	2	66.6	1	33.4	-	-	3	100.0
TOTAL	264	68.2	102	26.1	21	5.7	387	100.0

NOTE: In addition to the above total 20 persons were diagnosed at death.

1 Treatment had been started in other hospitals in British Columbia or in other wards in the Vancouver General Hospital than T.B. Ward.

* Includes 12 positive smear cases only.

Table 5A. PLACE OF TREATMENT OF ACTIVE TUBERCULOUS CASES ACCORDING TO PRINCIPAL BACTERIOLOGICAL FINDINGS, British Columbia, 1985

BACTERIOLOGICAL FINDINGS	DOMICILIARY		HOSPITAL T.B. WARD		OTHER[1] GEN. HOSPS.		TOTAL	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
POSITIVE - Smear & culture (or smear only)								
Pulmonary	41	35.4	68	58.6	7	6.0	116*	100.0
Non-Pulmonary	14	100.0	-	-	-	-	14	100.0
Pleurisy	-	-	-	-	-	-	-	-
POSITIVE-Culture only								
Pulmonary	60	76.9	17	21.8	1	1.3	78	100.0
Non-Pulmonary	27	84.4	3	9.4	2	6.2	32	100.0
Pleurisy	8	88.9	1	11.1	-	-	9	100.0
NEGATIVE								
Pulmonary	26	89.7	3	10.3	-	-	29	100.0
Non-Pulmonary	12	86.0	2	14.0	-	-	14	100.0
Pleurisy	4	44.4	5	55.6	-	-	9	100.0
NOT EXAMINED								
Pulmonary	9	100.0	-	-	-	-	9	100.0
Non-Pulmonary	8	100.0	-	-	-	-	8	100.0
Pleurisy	3	75.0	1	25.0	-	-	4	100.0
TOTAL	212	65.8	100	31.1	10	3.1	322	100.0

NOTE: In addition to the above total 18 persons were diagnosed at death.

1 Treatment had been started in other hospitals in British Columbia or in other wards in the Vancouver General Hospital than T.B. Ward, VGH.

* Includes 7 positive smear cases only.

Table 6. **BRITISH COLUMBIA RESIDENTS ON CHEMOPROPHYLAXIS AS OF DECEMBER 31, 1984-1985 BY INDICATION FOR THERAPY**

INDICATION FOR CHEMOPROPHYLAXIS	1984 Number	1984 Percent	1985 Number	1985 Percent
1. Positive tuberculin reactor with extra risk factor				
A. Contact	325	48.3	240	36.0
B. Convertor	73	10.8	82	12.5
C. Steroids	15	2.2	24	3.7
D. Diabetes, Sarcoid, Silicosis, Radiotherapy, etc.	3	0.4	8	1.2
	416	62.0	354	54.1
2. Positive tuberculin reactor without identified extra risk factor.	166	25.0	206	31.5
3. Chest x-ray evidence of inactive tuberculosis.[1]				
A. Inactive Tuberculosis: No prev. Treatment	3	0.4	3	0.4
B. Inactive Tuberculosis: Prev. poor Treatment	8	1.2	9	1.4
C. Inactive Tuberculosis: Prev. good treatment	1	0.1	1	0.1
D. Inactive Tuberculosis: details of prev. treatment not known.	5	0.7	1	0.1
E. Presumed Tuberculosis Inactive	66	10.0	69	10.5
	83	12.0	83	12.7
4. Miscellaneous:				
A. Localized pulmonary fibrosis	2	0.2	6	0.9
B. Insufficient data	6	0.8	5	0.8
	8	1.0	11	1.7
TOTAL:	673	100.0	654	100.0

[1] Most have positive tuberculin reaction; A, B, C, D. have documented previous active tuberculosis. In E, there is presumptive evidence of previous tuberculosis without documentation of an active episode. (See definition under "Active Cases" later in this report).

Table 6A.

OUTCOME OF CHEMOPROPHYLAXIS, 1984-1985
BY REASON TREATMENT DISCONTINUED AND TOTAL DURATION[1] OF DRUG THERAPY.

Number of Days:	1-90		91-180		181-270		271-335		336-365		366-545		546 & Over		1984		1985	
	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	No.	%	No.	%
TREATMENT:																		
1. Completed[2]	14	19	24	30	32	44	44	66	91	197	230	168	4	6	439	60.0	530	66.0
II. Incomplete																		
DRUG REACTION	33	35	23	24	8	14	2	-	1	-	-	-	-	-	67	9.0	73	9.0
DEATH	7	1	2	4	1	-	2	1	-	-	-	-	4	2	16	2.0	8	0.9
TRANSFER OUT OF PROVINCE	3	14	5	11	4	10	2	5	-	-	-	1	-	-	14	2.0	41	5.1
LOST TO FOLLOW-UP	8	12	10	10	7	9	7	1	2	-	2	2	-	-	36	5.0	34	4.2
UNCOOPERATIVE	27	27	54	30	27	30	15	5	-	1	6	7	-	-	129	18.0	100	12.4
OTHERS[3]	21	13	6	4	4	2	1	1	-	-	-	-	-	-	32	4.0	20	2.4
TOTAL	113	121	124	113	83	109	73	79	94	198	238	178	8	8	733	100.	806	100.

[1] The words "total duration" refer to the duration of the current course of drug treatment to the date when finally discontinued. This duration is not necessarily synonymous with the total duration of adequate treatment.

[2] The term "completed" refers to treatment of adequate quality and duration and/or discontinued on medical advice for reasons other than those listed in II. e.g. completion of treatment begun in another jurisdiction (another province).

[3] e.g. B.C.G.; Pregnancy; Negative Tuberculin; Stopped by Private Physicians without consulting T.B. Division.

Table 7. PERSONS ON OUT-PATIENT[2] DRUG THERAPY (ANTI-TUBERCULOSIS) BY HEALTH DISTRICT, AGE-GROUP AND SEX, AS OF DECEMBER 31, 1984
(Excludes persons on Chemoprophylaxis)

HEALTH DISTRICT	0 - 14		15 - 24		25 - 34		35 - 44		45 - 54		55 - 64		65+		Totals[1]		GRAND TOTAL
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Central Kootenay	-	-	-	-	-	-	-	-	-	-	-	-	2	1	2	1	3
North Okanagan	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	1	2
South Okanagan	-	-	-	-	-	-	1	-	2	-	-	-	3	-	6	-	6
South Central	-	-	-	-	1	1	-	-	-	-	-	-	1	1	2	4	6
Upper Fraser	-	-	-	-	1	-	-	-	-	-	-	1	2	1	-	3	2	5
Central Fraser	1	-	2	-	-	1	-	-	-	-	-	-	-	-	3	3	4	7
Boundary	-	1	2	2	1	1	2	-	-	-	-	-	2	1	2	6	8	14
Simon Fraser	-	1	-	1	1	1	1	-	-	1	-	1	1	1	3	6	9
Coast-Garibaldi	-	-	-	1	-	-	-	-	1	-	-	1	1	2	2	4	6
Central Vancouver Island	-	-	-	1	-	1	2	-	-	-	-	-	3	4	5	6	11
Upper Island	-	1	-	-	-	-	-	-	-	-	-	-	1	1	-	1	2	3
Cariboo	-	-	-	1	1	-	-	2	-	-	-	-	-	-	1	1	4	5
Skeena	2	-	-	1	-	1	-	-	1	-	2	-	3	1	8	3	11
Peace River	-	-	1	-	1	-	1	-	-	-	-	-	1	-	4	-	4
Northern Interior	2	4	1	2	3	3	2	-	1	1	-	-	1	2	10	12	22
Vancouver	2	4	10	10	9	14	13	11	15	4	14	5	15	11	78	59	137
Capital Regional District Community Health Service	-	-	1	1	2	1	-	3	1	-	3	3	-	5	7	13	20
Burnaby	-	-	3	2	4	3	-	-	1	1	1	1	3	1	12	8	20
Richmond	-	-	-	-	-	-	1	-	1	-	-	1	1	1	3	2	5
North Shore	-	-	-	1	-	1	2	2	-	-	1	1	-	1	3	6	9
TOTAL	7	11	20	23	24	28	25	19	24	7	22	19	38	36	160	145	305

[1] Includes 38 Registered Indians.
[2] Some persons in this table will have been treated in hospital for a period. During hospital stay will have been assigned to District of residence.

NOTE: An additional 18 persons were receiving antimicrobial drug therapy for mycobacteria other than M. tuberculosis.

Table 7A. PERSONS ON OUT-PATIENT[2] DRUG THERAPY (ANTI-TUBERCULOSIS) BY HEALTH DISTRICT, AGE-GROUP AND SEX, AS OF DECEMBER 31, 1985
(Excludes persons on Chemoprophylaxis)

HEALTH DISTRICT	0 - 14		15 - 24		25 - 34		35 - 44		45 - 54		55 - 64		65+		Totals[1]		GRAND TOTAL
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Central Kootenay	-	-	-	-	-	-	-	-	1	-	-	-	1	-	2	-	2
East Kootenay	-	-	-	1	-	-	-	-	-	-	-	-	1	1	1	2	3
South Okanagan	1	-	-	-	-	1	-	-	1	-	-	2	4	-	6	3	9
South Central	-	-	-	-	-	-	-	-	1	1	-	-	-	-	1	1	2
Upper Fraser	-	1	2	-	-	-	-	-	1	-	-	-	2	-	5	1	6
Central Fraser	-	-	-	1	-	-	-	1	2	-	1	1	1	2	4	5	9
Boundary	-	-	2	-	1	2	2	1	-	-	2	1	5	1	12	5	17
Simon Fraser	-	1	-	1	1	2	-	-	1	-	-	-	2	1	4	5	9
Coast-Garibaldi	-	-	-	-	-	2	1	-	-	-	1	1	1	-	3	3	6
Central Vancouver Island	1	3	-	-	-	-	-	-	1	1	1	-	-	3	3	7	10
Upper Island	1	-	-	-	2	-	1	-	-	-	1	1	1	-	6	1	7
Cariboo	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	1
Skeena	2	-	1	-	2	5	-	-	1	2	-	-	2	-	8	7	15
Peace River	-	-	-	-	-	1	-	-	-	1	1	-	-	-	1	2	3
Northern Interior	-	3	1	1	1	1	2	-	-	-	-	-	1	4	4	11	15
Vancouver	-	2	4	7	15	11	12	7	10	7	13	4	13	10	67	48	115
Capital Regional District Community Health Service	1	-	-	-	3	1	-	1	-	-	2	-	3	2	9	4	13
Burnaby	1	1	1	3	-	1	2	1	-	-	4	-	4	1	12	7	19
Richmond	-	-	-	-	1	-	-	-	2	-	-	1	2	-	5	1	6
North Shore	1	-	-	-	-	-	-	1	-	-	1	-	2	1	4	2	6
Unallocated to Health Unit	-	-	-	-	-	-	-	-	-	-	-		1	-	1	-	1
TOTAL	8	11	11	14	27	27	19	14	21	12	27	11	46	26	159	115	274

[1] Includes 59 Registered Indians.

[2] Some persons in this table will have been treated in hospital for a period. During hospital stay will have been assigned to District of residence.

NOTE: An additional 24 persons were receiving antimicrobial drug therapy for mycobacteria other than M. tuberculosis.

Table 8.

OUTCOME OF DRUG THERAPY OF ACTIVE TUBERCULOSIS, 1984-1985
BY REASON TREATMENT DISCONTINUED AND TOTAL DURATION[1] OF DRUG THERAPY.

Number of Days:	1-90		91-180		181-270		271-335		336-365		366-545		546 & Over		1984		1985	
	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	No.	%	No.	%
TREATMENT:																		
1. Completed[2]	1	1	5	3	51	42	122	110	35	45	74	47	13	15	301	80.3	263	83.1
11. Incomplete																		
DRUG REACTION	1	-	3	1	3	1	-	-	1	-	-	-	-	-	8	2.1	2	0.6
DEATH	6	3	5	4	3	4	-	3	1	-	1	-	-	1	16	4.3	15	4.7
TRANSFER OUT OF PROVINCE	4	3	10	6	3	3	-	1	1	-	-	1	-	-	18	4.8	14	4.4
LOST TO FOLLOW-UP	-	-	2	2	4	2	-	2	-	-	2	-	-	-	8	2.1	6	1.9
UNCOOPERATIVE	3	-	3	1	5	4	6	4	-	2	-	2	2	2	19	5.1	15	4.7
OTHERS[3]	-	-	2	-	2	1	1	1	-	-	-	-	-	-	5	1.3	2	0.6
TOTAL	15	7	30	17	71	57	129	121	38	47	77	50	15	18	375	100	317	100.

[1] The words "total duration" refer to the duration of the current course of drug treatment to the date when finally discontinued. This duration is not necessarily synonymous with the total duration of adequate treatment.

[2] The term "completed" refers to treatment of adequate quality and duration and/or discontinued on medical advice for reasons other than those listed in 11. e.g. completion of treatment begun in another jurisdiction (another province).

[3] e.g. Pregnancy; Stopped by Private Physicians without consulting T.B. Division; Reassessment of diagnosis and activity.

SECTION III

DIAGNOSTIC & SURVEY

CLINICS

TABLE 9

Table 9.

YIELD OF SCREENING PROGRAM BY ABNORMAL CONDITION DETECTED*
1984 - 1985
TUBERCULOSIS CONTROL, BRITISH COLUMBIA.

	TOTAL X-RAYED	ACTIVE TUBERCULOSIS	NEW PULMONARY TUBERCULOUS CASES [1]	KNOWN PULMONARY TUBERCULOUS CASES [1]	NON-TUBERCULOUS CONDITIONS
1984					
TOTAL	8276	14	115	74	577
RATES PER 100,000		169	1287		
1985					
TOTAL	8383	19	119	133	472
RATES PER 100,000		226	1419		

* X-rays taken and or interpreted by Division of T.B. Control. Total number of x-rays and rates of various abnormalities drawn from selected clinics (of Division) which have adopted uniform recording practices.

NOTE: The numbers in this table represent persons with various abnormalities on chest x-ray.

[1] Includes Active/Inactive/Presumed T.B. Inactive disease.

Table 10.

NUMBER OF PERSONS VACCINATED WITH B.C.G.
British Columbia, 1984 & 1985.

GROUPS TO WHOM B.C.G.VACCINATIONS WERE GIVEN	DIVISION OF TUBERCULOSIS CONTROL		HEALTH[1] UNITS		PACIFIC[2&3] REGION HEALTH SERVICES		B.C.I.T.		T O T A L	
	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985
OCCUPATIONAL GROUPS										
Nurses	-	-	-	-	-	-	-	-	-	-
Students	6	3	-	-	-	-	45	32	51	35
Other Hospital Personnel	-	2	5	-	-	-	-	-	5	2
Medical Students	5	6	-	-	-	-	-	-	5	6
NATIVE INDIANS (REGISTERED)										
Newborn	1	-	33	18	274	323	-	-	308	341
Children & Adults	1	-	1	-	-	17	-	-	2	17
ALL OTHER PERSONS										
Newborn (Contacts)	-	-	-	-	-	-	-	-	-	-
Newborn (Not Contacts)	-	1	1	-	-	-	-	-	1	1
Children & Adults (Contacts)	2	-	-	-	-	-	-	-	2	-
Children & Adults (Not Contacts)	24	29	1	-	-	-	-	-	25	29
TOTAL	39	41	41	18	274	340	45	32	399	431

[1] Given by Provincial Health Units

[2] In 1984-1985 fiscal year 668 Native Indians (Registered and on reserve) were born. Of these 274 (41%) received B.C.G. vaccine. (Data courtesy of Medical Services, Pacific Region).

[3] In 1985-1986 fiscal year 597 Native Indians (Registered and on reserve) were born. O these 323 (54%) received B.C.G. vaccine. (Data courtesy of Medical Services, Pacific Region).

SECTION IV

ACTIVE TUBERCULOSIS

TABLES 11 - 21

Table 11. INCIDENCE OF ACTIVE TUBERCULOSIS BY AGE-GROUP AND SEX, British Columbia, 1984

YEAR	MALES				FEMALES				TOTAL			
	BACILLARY CASES		ALL ACTIVE CASES		BACILLARY CASES		ALL ACTIVE CASES		BACILLARY CASES		ALL ACTIVE CASES	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
0 - 14	4	1.3	9	2.9	1	0.3	11	3.8	5	0.8	20	3.3
15 - 24	16	6.6	25	10.3	21	9.0	29	12.4	37	7.8	54	11.4
25 - 34	30	11.9	36	14.3	20	7.8	23	8.9	50	9.8	59	11.6
35 - 44	20	9.8	25	12.3	24	12.2	29	14.7	44	11.0	54	13.5
45 - 54	22	14.8	28	18.8	13	0.7	19	15.7	35	12.1	47	16.2
55 - 64	32	24.2	36	27.2	18	12.6	21	14.7	50	18.1	57	20.7
65 - 74	27	29.2	33	35.7	18	16.2	24	21.6	45	22.1	57	28.0
75 & Over	29	57.1	32	62.9	19	25.0	27	35.6	48	37.8	59	46.5
TOTAL	180	12.6	224	15.7	134	9.2	183	12.6	314	10.9	407	14.1

Rates per 100,000 population - June 1984 - as prepared by Statistics Canada.

Table 11A. INCIDENCE OF ACTIVE TUBERCULOSIS BY AGE-GROUP AND SEX, British Columbia, 1985

YEAR	MALES				FEMALES				TOTAL			
	BACILLARY CASES		ALL ACTIVE CASES		BACILLARY CASES		ALL ACTIVE CASES		BACILLARY CASES		ALL ACTIVE CASES	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
0 - 14	4	1.3	11	3.8	2	0.6	9	3.0	6	1.6	20	3.3
15 - 24	9	3.8	12	5.0	10	4.4	14	6.1	19	4.1	26	5.6
25 - 34	32	12.6	42	16.6	22	8.5	30	11.6	54	10.6	72	14.1
35 - 44	21	10.0	24	11.4	11	5.3	16	7.8	32	7.7	40	9.6
45 - 54	30	20.1	33	22.1	12	8.4	15	10.5	42	14.4	48	16.5
55 - 64	31	23.1	37	27.6	9	6.3	10	7.0	40	14.4	47	35.0
65 - 74	20	20.9	24	25.1	11	9.5	15	13.0	31	14.7	39	18.5
75 & Over	23	43.1	28	52.5	14	17.6	20	25.2	37	27.9	48	36.2
TOTAL	170	11.8	211	14.7	91	6.2	129	8.9	216	9.0	340	11.8

Rates per 100,000 population - June 1985 - as prepared by Statistics Canada.

Table 12. ACTIVE TUBERCULOSIS FOR ALL CASES AND BACILLARY ONLY, British Columbia, 1979 - 1985

YEAR	MALES				FEMALES				TOTAL			
	BACILLARY CASES		ALL ACTIVE CASES		BACILLARY CASES		ALL ACTIVE CASES		BACILLARY CASES		ALL ACTIVE CASES	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1979	139	14.0	235	18.4	97	7.0	150	11.6	270	10.5	385	15.0
1980	193	14.7	252	19.7	94	7.2	146	11.0	287	10.9	398	15.1
1981	167	12.7	210	15.8	120	9.0	168	12.7	287	10.9	378	14.3
1982	165	12.1	231	16.9	118	8.6	187	13.6	283	10.3	418	15.2
1983	186	13.2	235	16.7	96	6.7	133	9.3	282	9.9	368	13.0
1984	180	12.6	224	15.6	134	9.3	183	12.7	314	10.9	407	14.2
1985	170	11.8	211	14.7	91	6.2	129	8.9	261	9.0	340	11.8

Rates per 100,000 population, as per Statistics Canada census June, 1985.

Table 13.

ACTIVE TUBERCULOSIS
AGENCY PROVIDING INITIAL INVESTIGATION (USUALLY X-RAY)
LEADING TO THE DIAGNOSIS.
British Columbia, 1984 - 1985

SOURCE		1984	1985
UNITS OF THE DIVISION:			
Willow Chest Centre:			
	Survey Clinic	4	6
	Diagnostic Clinic	34	23
New Westminster Chest Centre:			
	Survey Clinic	3	-
	Diagnostic Clinic	10	10
Victoria & Island Chest Centre:			
	Survey Clinic	-	1
	Diagnostic Clinic	3	7
Travelling Clinic		20	11
(Verification by Travelling Clinic)		3	2
Mobile Clinic		8	13
TOTAL		85	73
Percent		21	21.5
INDIAN HEALTH SERVICES:			
Indian Health Services		1	-
Indian Mobile (Survey)		4	1
TOTAL		5	1
Percent		1	0.2
OTHER:			
Private Radiologist		70	44
Private Physicians Office		10	7
Mental Health Services		-	-
Ex-Province (including Immigration)		11	11
Provincial Jails (LMRCC & Prince George)		4	1
TOTAL		95	63
Percent		23	18.5
GENERAL HOSPITALS:			
Survey Admission Chest X-Ray		-	2
Diagnostic Film: Out-patient		48	43
" " : In-patient		96	77
Diagnosed in hospital on basis other than x-ray		43	46
Day care (basis other than x-ray)		16	17
TOTAL		203	185
Percent		50	54.5
NOTIFIED ON DEATH:			
Notified on death		13	14
Notified on death; T.B. diagnosed during life		6	4
TOTAL		19	18
Percent		5	5.3
GRAND TOTAL		407	340
PERCENT		100	100

Table 14 PRINCIPAL DIAGNOSIS OF ACTIVE TUBERCULOSIS, AMONG NON-INDIANS AND INDIANS, British Columbia, 1984

DIAGNOSIS	NON-INDIANS[1]		REGISTERED INDIANS	
	Number	Percent	Number	Percent
PULMONARY:				
Primary	14	4.0	9	15.3
Minimal	112	32.2	17	28.8
Moderately Advanced	68	19.5	13	22.0
Far Advanced	39	11.2	5	8.5
Miliary	12	3.4	2	3.4
Silico-Tuberculosis	8	2.3	-	-
Pleurisy	29	8.3	5	8.5
Tuberculoma	1	0.3	1	1.7
Other (Extent Unknown)	-	-	1	1.7
NON-PULMONARY:				
Meninges and Central Nervous System	-	-	-	-
Intestines and Peritoneum	6	1.7	1	1.7
Bones and Joints	10	2.9	-	-
Skin and Subcutaneous Cell Tissue	1	0.3	-	-
Lymphatic System	38	11.0	4	6.7
Genito-urinary System	7	2.0	1	1.7
Multiple Sites and Other Organs	3	0.9	-	-
TOTAL	348	100.0	59	100.0

[1] Includes 31 non-status Indians.

Table 14A **PRINCIPAL DIAGNOSIS OF ACTIVE TUBERCULOSIS, AMONG NON-INDIANS AND INDIANS, British Columbia, 1985**

DIAGNOSIS	NON-INDIANS[1]		REGISTERED INDIANS	
	Number	Percent	Number	Percent
PULMONARY:				
Primary	10	3.5	11	19.3
Minimal	95	33.6	19	33.3
Moderately Advanced	52	18.4	9	15.8
Far Advanced	29	10.2	3	5.2
Miliary	15	5.3	1	1.8
Silico-Tuberculosis	3	1.1	-	-
Pleurisy	18	6.4	5	8.8
Tuberculoma	1	0.4	-	-
Other (Extent Unknown)	1	0.3	-	-
NON-PULMONARY:				
Meninges and Central Nervous System	2	0.7	-	-
Intestines and Peritoneum	2	0.7	1	1.8
Bones and Joints	8	2.8	1	1.8
Skin and Subcutaneous Cell Tissue	2	0.7	-	-
Lymphatic System	28	9.9	4	7.0
Genito-urinary System	12	4.2	3	5.2
Multiple Sites and Other Organs	5	1.8	-	-
TOTAL	283	100.0	57	100.0

[1] Includes 17 non-status Indians.

Table 15 ACTIVE TUBERCULOSIS[1] BY HEALTH DISTRICT OF RESIDENCE, ALL ACTIVE CASES INCLUDING STATUS INDIANS
British Columbia, 1984-1985

HEALTH DISTRICT	ALL ACTIVE CASES			
	1984[2]		1985[3]	
	Number	Rate*	Number	Rate*
East Kootenay	1	1.3	5	6.6
Central Kootenay	4	4.6	1	1.2
North Okanagan	2	1.1	1	0.6
South Okanagan	15	24.7	5	5.3
South Central	7	6.9	2	1.8
Upper Fraser Valley	10	7.3	19	15.3
Central Fraser Valley	8	1.1	9	6.7
Boundary	22	8.5	19	7.2
Simon Fraser	14	9.2	9	5.9
Coast-Garibaldi	9	16.5	6	11.6
Central Vancouver Island	14	8.2	14	8.1
Upper Island	4	4.5	11	12.1
Cariboo	6	8.4	4	6.0
Skeena	14	17.3	17	20.2
Peace River	4	6.8	7	11.1
Northern Interior	33	28.4	12	10.1
Metropolitan Board of Health of Greater Vancouver	209	41.0	176	21.5
Vancouver City	166	39.0	144	33.6
Burnaby	23	16.2	18	12.5
North/West Vancouver	11	7.8	7	5.0
Richmond	9	8.8	7	6.7
Capital Regional District	27	10.4	23	8.8
Ex-Province	4	-	-	-
TOTAL	407	14.1	340	11.8

1 Includes active and reactivated cases.
2 Population census - S.C. - 1984.
3 Population census - S.C. - 1985.
* Rates are per 100,000 population.

Table 16.

PREVIOUS RADIOLOGICAL FINDINGS IN ACTIVE CASES DIAGNOSED IN 1984 - 1985

	1984		1985	
	Number	Percent	Number	Percent
KNOWN PRE-EXISTING CHEST X-RAY ABNORMALITY:				
REACTIVATION I				
Inactive Tuberculosis (previously documented active episode(s))	50	12.3	38	11.2
REACTIVATION II				
Presumed Tuberculosis Inactive	19	4.7	18	5.3
PRE-EXISTING CHEST X-RAY ABNORMALITY - OTHER				
Pulmonary Fibrosis (Localized and Diffuse)	18	4.4	18	5.3
Old Pleurisy & Other Pleural Changes	5	1.2	7	2.1
Healed Primary Complex	7	1.7	8	2.3
Hilar Calcification	5	1.2	3	0.8
Bronchovascular changes	4	1.0	2	0.6
Solitary Lung Densities	5	1.2	2	0.6
Other Conditions	6	1.5	6	1.8
	52	12.7	46	13.5
Sub-total	121	29.7	102	30.0
NO PRE-EXISTING CHEST X-RAY ABNORMALITY:				
Negative X-ray	73	18.0	70	20.6
No Previous Chest X-ray Taken or Available	213	52.3	168	49.4
Sub-Total	286	70.3	238	70.0
TOTAL CASES	407	100.0	340	100.0

Table 17

INCIDENCE OF ACTIVE[1] TUBERCULOSIS BY ETHNIC ORIGIN, British Columbia, 1984–1985

1984 ETHNIC ORIGIN	BACTERIOLOGICALLY CONFIRMED CASES		TOTAL ACTIVE TUBERCULOSIS	
	Number of Cases	Rate[2]	Number of Cases	Rate[2]
White and Others	153	5.9	198	7.7
Indian (Registered)	48	77.0	59	95.0
Indian (Non-Status)	25	108.9	31	135.1
Chinese	55	94.7	66	113.6
Japanese - Korean	4	46.7	4	46.7
East Indian	15	41.5	25	69.1
Vietnamese	7	109.6	12	187.9
Filipino	7	57.9	12	99.4
TOTAL	314		407	

1985 ETHNIC ORIGIN	BACTERIOLOGICALLY CONFIRMED CASES		TOTAL ACTIVE TUBERCULOSIS	
	Number of Cases	Rate[2]	Number of Cases	Rate[2]
White and Others	115	4.5	150	5.8
Indian (Registered)	45	72.4	57	91.7
Indian (Non-Status)	13	56.6	17	74.1
Chinese	44	75.7	59	101.5
Japanese - Korean	5	58.3	5	58.3
East Indian	23	63.6	29	80.2
Vietnamese	11	172.2	14	219.2
Filipino	5	41.4	9	74.6
TOTAL	261		340	

[1] Includes active and reactivated cases.

[2] Rates per 100,000 population based on estimated population only from 1981 Canada Census. (except for Registered Indians, where population taken from register for 1984: 62,094 on and off reserve).

Table 17A

INCIDENCE OF ACTIVE[1] TUBERCULOSIS AMONG CANADIAN BORN AND FOREIGN-BORN, British Columbia, 1984-1985

	BACTERIOLOGICALLY CONFIRMED CASES				TOTAL ACTIVE TUBERCULOSIS			
	1984		1985		1984		1985	
	Number of Cases	Rate[2]	Number of Cases	Rate[2]	Number of Cases	Rate[2]	Number of Cases	Rate[2]
Canadian Born	161	7.6	132	6.2	209	9.9	172	8.1
Foreign-Born	153	24.2	129	20.4	198	31.3	168	26.6
Canadian Citizen	33	(19.4)[4]	40	(15.2)[4]	50	(24.8)[4]	56	(20.7)[4]
Landed Immigrant	90		56		107		75	
Ministers Permit[3]	-		3		-		3	
Visitors (Sailors, etc.)	5		7		9		8	
Student Visas	1		2		1		2	
Not known	24		21		31		24	

[1] Includes active and reactivated cases.
[2] Rates per 100,000 population based on estimated population only from 1981 Census. (Born in Canada: 2,112,847; born outside Canada: 631,620 (or 23.01%). Total B.C. population, 1981: 2,744,467).
[3] Non-landed Immigrants.
[4] Foreign-born rates confined to Canadian Citizens and Landed Immigrants.

Table 18. CONTRIBUTION OF REACTIVATIONS TO TOTAL ACTIVE TUBERCULOSIS CASES BY AGE GROUP
British Columbia, 1984-1985

TYPE OF CASE	Age-Group				TOTAL
	0-24	25-44	45-64	65+	
ALL ACTIVE CASES - 1984					
TOTAL Number of Cases	74	113	104	116	407
Number of Reactivations I	4	10	16	20	50
Percent of Total By Age	5.4	8.8	15.3	17.2	12.2
Number of Reactivations II	-	4	5	10	19
Percent of Total By Age	-	3.5	4.8	8.6	4.7
TOTAL REACTIVATIONS	4	14	21	30	69
Percent of Total By Age	5.4	12.3	20.1	25.8	16.9
ALL ACTIVE CASES - 1985					
TOTAL Number of Cases	45	112	95	87	340
Number of Reactivations I	2	7	16	13	38
Percent of Total By Age	4.4	6.3	16.8	14.9	11.2
Number of Reactivations II	-	3	6	10	18
Percent of Total By Age	-	2.7	6.3	11.5	5.3
TOTAL REACTIVATIONS	2	10	22	22	56
Percent of Total By Age	4.4	9.0	23.1	26.4	16.5

Reactivations I: Derived from Inactive Tuberculosis Cases (previously documented active).

Reactivations II: Derived from Presumed Pulmonary Tuberculosis, Inactive (not previously documented active tuberculosis cases).

Table 19

TOTAL ACTIVE CASES OF TUBERCULOSIS
(NEW ACTIVE AND REACTIVATED* CASES)
RATES PER 100,000 AGE-SPECIFIC (ESTIMATED) POPULATION
British Columbia, 1976-1985

AGE-GROUP	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
0 - 14 Years	4.5	2.7	6.6	7.2	4.9	4.3	6.8	4.4	3.3	3.3
15 - 24 Years	9.0	7.0	10.3	7.1	8.7	8.1	9.8	6.3	11.4	5.6
25 - 34 Years	15.4	14.7	14.3	13.6	12.5	14.0	14.7	10.6	11.6	14.1
35 - 44 Years	21.3	22.5	18.6	20.1	18.0	18.0	15.2	13.4	13.5	9.6
45 - 54 Years	17.9	24.2	21.9	20.4	19.9	19.5	17.5	21.8	16.2	16.5
55 - 64 Years	29.4	21.7	25.3	21.6	22.0	22.4	24.5	24.3	20.7	35.0
65 - 74 Years	29.8	35.1	32.3	27.5	28.5	32.5	28.4	22.3	28.0	18.5
75 Years & Over	41.4	32.0	45.3	35.9	51.5	25.3	36.7	29.6	46.5	36.2

* Includes Reactivations I: Derived from Inactive Tuberculosis Cases (previously documented active) and Reactivations II: Derived from Presumed Pulmonary Tuberculosis Inactive (not previously documented active tuberculosis cases).

Table 20

NEW ACTIVE AND REACTIVATED* TUBERCULOSIS CASES AMONG ALL RACES, EXCLUDING REGISTERED INDIANS, British Columbia, 1980 - 1985

AGE-GROUP	1980		1981		1982		1983		1984		1985	
	New Active	Reacti-vation	New Active	Reacti-vation	New Active	Reacti-vation	New Active	Reacti vation	New Active	Reacti-vation	New Active	Reacti-vation
0 - 14	23	-	18	1	36	-	18	-	11	1	12	-
15 - 24	38	2	33	-	44	2	27	-	38	3	19	2
25 - 44	83	8	96	5	94	11	69	17	81	10	80	7
45 - 54	38	8	37	6	33	6	46	10	36	6	34	6
55 - 64	36	10	36	12	48	12	38	17	41	12	28	13
65 & Over	76	21	62	15	62	27	55	21	80	29	63	19
TOTAL	294	49	282	39	317	58	253	65	287	61	236	47

* Includes Reactivations I: Derived from Inactive Tuberculosis Cases (previously documented active), and Reactivations II: Derived from Presumed Pulmonary Tuberculosis Inactive (not previously documented active tuberculosis cases).

Table 21 NEW ACTIVE AND REACTIVATED* TUBERCULOSIS CASES AMONG REGISTERED INDIANS, British Columbia, 1980 - 1985.

AGE-GROUP	1980		1981		1982		1983		1984		1985	
	New Active	Reacti-vation	New Active	Reacti-vation	New Active	Reacti-vation	New Active	Reacti-vation	New Active	Reacti-vation	New Active	Reacti-vation
0 - 14	5	-	6	-	4	-	8	-	8	-	8	-
15 - 24	3	-	7	-	2	-	3	1	13	-	5	-
25 - 44	15	8	15	5	12	7	15	3	18	4	22	3
45 - 54	7	1	6	4	5	5	5	1	4	1	7	1
55 - 64	4	4	5	2	3	-	7	3	2	2	4	2
65 & Over	5	3	5	2	4	1	3	1	6	1	2	3
TOTAL	39	16	44	13	30	13	41	9	51	8	48	9

* Includes Reactivations I: Derived from Inactive Tuberculosis Cases (previously documented active), and Reactivations II: Derived from Presumed Pulmonary Tuberculosis Inactive (not previously documented active tuberculosis cases).

SECTION V

CONTRACT TRACING

TABLES 22 - 25

Table 22

CONTACT INVESTIGATION - MORBIDITY

BY AGE AND INITIAL TUBERCULIN STATUS OF CONTACTS[1] AND BACILLARY STATUS OF SOURCE.
TYPE OF SOURCE: PULMONARY TUBERCULOSIS, ACTIVE, (DIAGNOSED IN 1984).
TYPE OF CONTACT: HOUSEHOLD, UNDER AND OVER 20 YEARS (DIAGNOSED IN 1984).
British Columbia, 1984.

	UNDER 20			20&OVER			TOTAL		
SOURCE BACTERIOLOGY	Total Contacts	Number Active	Morbidity Percent	Total Contacts	Number Active	Morbidity Percent	Total Contacts	Number Active	Morbidity Percent
Positive Smear & Culture							(426)	(18)	
All Contacts	86	9	10.5	164	8	4.8	250	17	6.8
Tuberculin Positive Contacts[2]	32(37%)	9	28.1	93	7	7.5	125	17	13.6
Positive Culture Only									
All Contacts	41	-	-	67	-	-	108	-	-
Tuberculin Positive Contacts[2]	4(9%)	-	-	28	-	-	32	-	-
Negative Smear & Culture									
All Contacts	16	1	6.2	27	-	-	43	1	2.3
Tuberculin Positive Contacts[2]	6(37%)	1	16.6	12	-	-	18	1	5.5
Not Examined									
All Contacts	2	-	-	1	-	-	3	-	-
Tuberculin Positive Contacts	-	-	-	-	-	-	-	-	-

1 This table excludes 22 household contacts whose age was not given. (404 + 22 = 426)
2 Positive tuberculin reaction defined as 10mm or greater induration.

Table 28A. CONTACT INVESTIGATION - MORBIDITY

BY AGE AND INITIAL TUBERCULIN STATUS OF CONTACTS[1] AND BACILLARY STATUS OF SOURCE.
TYPE OF SOURCE: - PULMONARY TUBERCULOSIS, ACTIVE, (DIAGNOSED IN 1985).
TYPE OF CONTACT: HOUSEHOLD, UNDER AND OVER 20 YEARS (DIAGNOSED IN 1985).
British Columbia, 1985.

	UNDER 20			20&OVER			TOTAL		
SOURCE BACTERIOLOGY	Total Contacts	Number Active	Morbidity Percent	Total Contacts	Number Active	Morbidity Percent	Total Contacts (164)	Number Active (20)	Morbidity Percent
Positive Smear & Culture									
All Contacts	22	10	45.4	67	7	9.5	89	17	17.8
Tuberculin Positive Contacts[2]	13	8	61.5	55	6	10.9	68	14	20.5
Positive Culture Only									
All Contacts	7	-	-	37	3	7.6	44	3	6.5
Tuberculin Positive Contacts[2]	4	-	-	25	3	12.0	29	3	10.3
Negative Smear & Culture									
All Contacts	5	-	-	7	-	-	12	-	-
Tuberculin Positive Contacts[2]	2	-	-	4	-	-	6	-	-
Not Examined									
All Contacts	2	-	-	9	-	-	11	-	-
Tuberculin Positive Contacts	-	-	-	4	-	-	4	-	-

[1] This table excludes 8 household contacts whose age was not given. (156 + 8 = 164)
[2] Positive tuberculin includes those with 10mm or greater induration.

Table 23

CONTACT INVESTIGATION - MORBIDITY

BY AGE OF CONTACTS AND PROXIMITY OF CONTACT
TYPE OF SOURCE: PULMONARY TUBERCULOSIS, ACTIVE, (DIAGNOSED IN 1984),
TYPE OF CONTACT: HOUSEHOLD AND NON-HOUSEHOLD, (DIAGNOSED IN 1984).
British Columbia, 1984.

AGE-GROUP	CONTACTS			NUMBER ACTIVE TB FOUND			PERCENT WITH ACTIVE T.B.		
	Household	Non-Household	Total	Household	Non-Household	Total	Household	Non-Household	Total
0 - 14 Years	103	87	190	7	3	10	6.8	3.4	5.2
15 - 19 Years	42	135	177	3	1	4	7.1	0.7	2.3
20 - 29 Years	90	301	391	2	6	8	2.2	2.0	2.0
30 - 39 Years	66	238	304	1	1	2	1.5	0.4	0.6
40 Years & Over	103	656	759	5	2	7	4.8	0.9	3.0
TOTAL	404	1417	1821	18	13	31	4.4	0.9	1.7

NOTE: Excludes 22 household contacts whose age was not given and 214 non-household contacts whose age was not given.

Table 23A

CONTACT INVESTIGATION - MORBIDITY

BY AGE OF CONTACTS AND PROXIMITY OF CONTACT
TYPE OF SOURCE: PULMONARY TUBERCULOSIS, ACTIVE, (DIAGNOSED IN 1985),
TYPE OF CONTACT: HOUSEHOLD AND NON-HOUSEHOLD, (DIAGNOSED IN 1985).
British Columbia, 1985.

AGE-GROUP	CONTACTS			NUMBER ACTIVE TB FOUND			PERCENT WITH ACTIVE T.B.		
	Household	Non-Household	Total	Household	Non-Household	Total	Household	Non-Household	Total
0 - 14 Years	29	251	280	7	3	10	24.1	1.2	3.6
15 - 19 Years	7	148	155	3	-	3	42.8	-	1.9
20 - 29 Years	41	460	501	2	1	3	4.8	0.2	0.5
30 - 39 Years	31	495	526	1	3	4	3.2	0.6	0.7
40 Years & Over	48	812	860	7	3	10	14.5	0.3	1.2
TOTAL	156	2166	2322	20	10	30	12.8	0.9	1.3

NOTE: Excludes 8 household contacts whose age was not given and 123 non-household contacts whose age was not given.

Table 24 CONTACT INVESTIGATION TUBERCULIN STATUS
BY AGE OF CONTACT AND BACILLARY STATUS OF SOURCE.
TYPE OF SOURCE: PULMONARY TUBERCULOSIS, ACTIVE (DIAGNOSED in 1984)
TYPE OF CONTACT: HOUSEHOLD.
British Columbia, 1984

	AGE-GROUP							TOTAL
	0-14	15-19	20-29	30-39	40-49	50-59	60 & Over	
Positive Smear & Culture								
Total Contacts	54	32	56	43	25	17	23	250
Tuberculin Tested	52	31	50	41	24	16	20	234
Positive[1]	16	16	32	28	15	8	10	125
Percent Positive	30.8	51.6	64.0	68.3	62.5	50.0	50.0	53.4
Positive Culture Only[2]								
Total Contacts	34	7	20	19	8	10	10	108
Tuberculin Tested	33	7	18	18	7	9	7	99
Positive[1]	2	2	9	4	4	5	6	32
Percent Positive	6.1	28.6	50.0	22.2	57.1	55.6	85.7	33.0
Negative Smear & Culture								
Total Contacts	14	2	14	4	2	3	4	43
Tuberculin Tested	13	2	14	3	2	3	3	40
Positive[1]	4	2	6	1	2	1	2	18
Percent Positive	30.8	100.0	42.9	33.3	100.0	33.3	66.7	43.9
Not Examined								
Total Contacts	1	1	-	-	-	-	1	3
Tuberculin Tested	1	-	-	-	-	-	1	2
Positive[1]	-	-	-	-	-	-	-	-
Percent Positive	-	-	-	-	-	-	-	-

1 Includes persons with a reaction of 10 mm.or greater
2 Includes positive culture, negative or no smear.

NOTE: This Table excludes 22 contacts whose age was not given.

Table 25. CONTACT INVESTIGATION TUBERCULIN STATUS
BY AGE OF CONTACT AND BACILLARY STATUS OF SOURCE
TYPE OF SOURCE: PULMONARY TUBERCULOSIS, ACTIVE (DIAGNOSED in 1984)
TYPE OF CONTACT: NON-HOUSEHOLD.
British Columbia, 1984

	AGE GROUP							TOTAL
	0-14	15-19	20-29	30-39	40-49	50-59	60 & Over	
Positive Smear & Culture								
Total Contacts	28	117	217	176	131	118	209	996
Tuberculin Tested	19	47	159	152	113	98	90	678
Positive[1]	11	42	118	134	105	89	88	587
Percent Positive	57.9	89.4	74.2	88.2	92.9	90.8	97.8	86.5
Positive Culture Only[2]								
Total Contacts	17	13	46	28	29	30	28	191
Tuberculin Tested	8	7	24	37	22	7	14	120
Positive[1]	1	4	23	32	21	7	10	98
Percent Positive	12.5	57.1	92.0	86.5	95.5	100.0	71.4	81.6
Negative Smear & Culture								
Total Contacts	41	5	16	8	4	5	9	88
Tuberculin Tested	39	4	15	6	4	4	8	79
Positive[1]	3	3	7	4	2	3	6	28
Percent Positive	7.7	75.0	46.7	66.7	50.0	75.0	75.0	35.4
Not examined								
Total Contacts	1	-	22	26	15	6	72	142
Tuberculin Tested	-	-	12	19	7	2	3	43
Positive[1]	-	-	11	18	6	2	2	39
Percent Positive	-	-	91.7	94.7	85.7	100.0	66.7	91.1

[1] Includes persons with a reaction of 10 mm. or greater.
[2] Includes positive culture, negative or no smear.

NOTE: This table excludes 214 contacts whose age was not given.

SECTION VI

TUBERCULOSIS MORTALITY

TABLES 26 - 30

Table 26

TUBERCULOSIS (ACTIVE) DEATHS NOTIFIED ON DEATH
British Columbia, 1984-1985

	Tuberculosis Principal Cause of Death		Tuberculosis Contributing Cause of Death		Tuberculosis Not Related to Death		TOTAL	
	1984	1985	1984	1985	1984	1985	1984	1985
Notified on death	6	12	5	2	2	-	13	14
Notified on death but diagnosed during life.	7	7	14	16	2	1	23	24
TOTAL	13	19	19	18	4	1	36	38

Table 27

TUBERCULOSIS (ACTIVE) DEATHS BY DIAGNOSIS
British Columbia, 1984-1985

	Tuberculosis Principal Cause of Death		Tuberculosis Contributing Cause of Death		Tuberculosis Not Related to Death		TOTAL	
	1984	1985	1984	1985	1984	1985	1984	1985
Miliary	5	8	1	1	-	-	6	9
Silico-TB	1	-	-	-	-	-	1	-
Far Advanced	5	7	6	6	-	-	11	13
Moderately Advanced	1	2	6	7	2	-	9	9
Minimal	-	1	3	2	1	-	4	3
Lymphadenitis	-	-	1	-	1	-	2	-
Extent Unknown	-	1	-	-	-	-	-	1
Pleurisy	1	-	2	2	-	-	3	2
Bone & Joint	-	-	-	-	-	1	-	1
TOTAL	13	19	19	18	4	1	36	38

Table 28

TUBERCULOSIS (ACTIVE) DEATHS BY COUNTRY OF BIRTH
British Columbia, 1984-1985

	Tuberculosis Principal Cause of Death		Tuberculosis Contributing Cause of Death		Tuberculosis Not Related to Death		TOTAL	
	1984	1985	1984	1985	1984	1985	1984	1985
Canadian Born								
Native Indians	2	6	1	4	-	-	3	10
Others	4	4	6	7	4	1	14	12
Foreign Born	3	9	7	5	-	-	10	14
Unknown	4	-	5	2	-	-	9	2
TOTAL	13	19	19	18	4	1	36	38

Table 29

TUBERCULOSIS (ACTIVE DEATHS BY AGE AND SEX
British Columbia, 1984-1985

		Tuberculosis Principal Cause of Death		Tuberculosis Contributing Cause of Death		Tuberculosis Not Related to Death		TOTAL	
		1984	1985	1984	1985	1984	1985	1984	1985
25 - 44 Years	M	-	-	1	2	-	-	1	2
	F	1	1	-	-	-	-	1	1
45 - 64 Years	M	1	5	5	7	2	1	8	13
	F	-	1	3	1	2	-	5	2
65 - 84 Years	M	5	3	7	3	-	-	12	6
	F	3	3	2	5	-	-	5	8
85 & Over	M	2	4	-	-	-	-	2	4
	F	1	2	1	-	-	-	2	2
TOTAL		13	19	19	18	4	1	36	38

Table 30

TUBERCULOSIS (ACTIVE) DEATHS BY DIAGNOSIS AND BACILLARY STATUS
British Columbia, 1984-1985

DIAGNOSES	NOTIFIED ON DEATH				NOTIFIED ON DEATH BUT DIAGNOSED DURING LIFE			
	Bacillary Only		All Active Cases		Bacillary Only		All Active Cases	
	1984	1985	1984	1985	1984	1985	1984	1985
Miliary	1	5	3	7	3	2	3	2
Far Advanced	-	2	2	4	9	9	9	9
Silico-Tuberculosis	-	-	-	-	1	-	1	-
Extent Unknown	-	-	-	1	-	-	-	-
Moderately Advanced	4	-	5	1	4	7	4	8
Minimal	1	-	1	-	3	3	3	3
Non-Pulmonary	-	-	-	-	1	1	2	1
Pleurisy	2	1	2	1	1	-	1	1
TOTAL	8	8	13	14	22	22	23	24

SECTION VII

ACTIVE TUBERCULOSIS

AMONG

REGISTERED INDIANS

TABLES 31 - 33

Table 31

INCIDENCE OF ACTIVE TUBERCULOSIS AMONG REGISTERED INDIANS, AGE-GROUP AND SEX, British Columbia, 1984.

AGE-GROUP	MALE		FEMALE		TOTAL	
	Bacillary Cases	All Active Cases	Bacillary Cases	All Active Cases	Bacillary Cases	All Active Cases
0 - 14	1	2	1	6	2	8
15 - 24	2	4	7	9	9	13
25 - 34	8	8	7	7	15	15
35 - 44	3	3	4	4	7	7
45 - 54	3	3	2	2	5	5
55 - 64	3	3	1	1	4	4
65 - 74	2	2	1	1	3	3
75 & Over	1	1	2	3	3	4
TOTAL	23	26	25	33	48	59
RATES	72.2	81.6	82.6	109.1	77.0	95.0

NOTE: Rates are based on the 1984 estimated population per 100,000.

1984 Population Registered Indians - On Reserve

Males	19,969
Females	19,186
TOTAL	39,155

On & Off Reserve

Males	31,848
Females	30,246
TOTAL	62,094

Table 31A

INCIDENCE OF ACTIVE TUBERCULOSIS AMONG REGISTERED INDIANS, AGE-GROUP AND SEX, British Columbia, 1985.

AGE-GROUP	MALE		FEMALE		TOTAL	
	Bacillary Cases	All Active Cases	Bacillary Cases	All Active Cases	Bacillary Cases	All Active Cases
0 - 14	3	5	1	3	4	8
15 - 24	1	2	1	3	2	5
25 - 34	6	8	7	8	13	16
35 - 44	5	5	4	4	9	9
45 - 54	4	5	3	3	7	8
55 - 64	4	5	1	1	5	6
65 - 74	2	2	1	1	3	3
75 & Over	1	1	1	1	2	2
TOTAL	26	33	19	24	45	57
RATES	81.6	103.6	62.8	79.3	72.4	91.7

NOTE: Rates are based on the 1984 estimated population per 100,000.

1984 Population Registered Indians - On & Off Reserve

Males	31,848
Females	30,246
TOTAL	62,094

Table 32 PRINCIPAL DIAGNOSIS OF ACTIVE TUBERCULOSIS AMONG REGISTERED INDIANS AND BACILLARY CASES, British Columbia, 1984

DIAGNOSIS	BACILLARY ONLY[1]		ALL ACTIVE CASES		BACILLARY AS PERCENT OF ALL ACTIVE CASES
	Number	Percent	Number	Percent	
PULMONARY					
Primary	3	6.4	9	15.3	33.3
Minimal	16	34.0	17	28.8	94.1
Moderately Advanced	13	27.6	13	22.0	100.0
Far Advanced	5	10.6	5	8.5	100.0
Miliary	2	4.3	2	3.4	100.0
Pleurisy	3	4.3	5	8.5	50.0
Other Pulmonary	2	4.3	2	3.4	100.0
NON-PULMONARY					
Lymphatic System	3	6.4	4	6.7	75.0
Intestines & Peritoneum	-	-	1	1.7	-
Bones & Joints	-	-	-	-	-
Genito-Urinary System	1	2.1	1	1.7	100.0
TOTAL	48	100.0	59	100.0	81.0

[1] In 5 cases bacillary status was not determined for the combined years 1984 and 1985.

Table 32A PRINCIPAL DIAGNOSIS OF ACTIVE TUBERCULOSIS AMONG REGISTERED INDIANS AND BACILLARY CASES, British Columbia, 1985

DIAGNOSIS	BACILLARY ONLY[1]		ALL ACTIVE CASES		BACILLARY AS PERCENT OF ALL ACTIVE CASES
	Number	Percent	Number	Percent	
PULMONARY					
Primary	6	13.3	11	19.3	54.5
Minimal	17	37.8	19	33.3	89.5
Moderately Advanced	8	17.8	9	15.8	88.9
Far Advanced	2	4.4	3	5.2	66.7
Miliary	1	2.2	1	1.8	100.0
Pleurisy	4	8.9	5	8.8	80.0
NON-PULMONARY					
Lymphatic System	3	6.7	4	7.0	75.0
Intestines & Peritoneum	1	2.2	1	1.8	100.0
Bones & Joints	-	-	1	1.8	-
Genito-Urinary System	3	6.7	3	5.2	100.0
TOTAL	**45**	**100.0**	**57**	**100.0**	**79.0**

[1] In 5 cases bacillary status was not determined for the combined years 1984 and 1985.

Table 33 ACTIVE TUBERCULOSIS BY HEALTH DISTRICT OF RESIDENCE FOR REGISTERED INDIANS, British Columbia, 1984-1985

HEALTH DISTRICT	NUMBER	
	1984	1985
South Okanagan	1	-
Central Fraser Valley	-	1
Coast Garibaldi	4	-
Central Vancouver Island	3	5
Upper Island	1	8
Cariboo	2	1
Skeena	7	10
Peace River	1	3
Northern Interior	20	6
Metropolitan Board of Health of Greater Vancouver	17	16
Capital Regional District	2	7
Ex-Province	1	-
TOTAL	59	57